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AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2.(Currently Amended) A method to operate a communication device, comprising: during a receive period,

receiving a first carrier and deriving a receiver tracking signal that is indicative of a frequency shift between the received first carrier and a reference signal, the receiver tracking signal derived from an accumulated plurality of outputs from a carrier loop tracking circuit; and

shifting a receiver baseband signal by an amount and in a direction indicated by the receiver tracking signal; and during a next transmission period,

shifting a transmitter baseband signal by an amount indicated by the receiver tracking signal during the receive period, and in a direction opposite to the direction indicated by the receiver tracking signal during the receive period; and

transmitting a second carrier signal that is modulated in accordance with the shifted transmitter baseband signal, wherein shifting comprises time multiplexing a digital phase shifter circuit between a receiver baseband subsystem and a transmitter baseband subsystem; wherein the receiver tracking signal comprises:

wherein f₀ is the receiver tracking signal;

CF is a clock frequency of a local clock;

SH value is a value output from the carrier loop tracking circuit; and

L is a length of an accumulator that stores a plurality of SH values, one from each of a plurality of sequential clock periods.

3.(Previously Presented) A method as in claim 2, wherein the first carrier and the second carrier each conveys a CDMA communication signal.

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4.(Previously Presented) A method as in claim 2, wherein the communication device comprises a TDD Customer Premises Equipment (CPE), and where the first carrier is

received from a transmitter of an Access Point (AP).

5.(Previously Presented) A method as in claim 2, wherein at the end of the receive

period a step is performed of storing the receiver tracking signal for use during the next

transmission period.

6.(Previously Presented) A method as in claim 2, wherein the step of shifting the

transmitter baseband signal functions to pre-compensate the transmitted second carrier signal

so as to reduce carrier acquisition time at a receiver of the transmitted second carrier signal.

7. (Canceled)

8.(Currently Amended) A communication device comprising a receiver baseband

subsystem and a transmitter baseband subsystem, and further comprising:

a receiver comprising circuitry that is operable during a receive period for receiving a

carrier and for deriving a receiver tracking signal that is indicative of a frequency and phase

shift between the received carrier and a reference signal, the receiver tracking signal derived

from an accumulated plurality of outputs from a carrier-loop tracking circuit, said receiver

further comprising shifting circuitry for rotating the frequency and phase of a receiver

baseband signal by an amount and in a direction indicated by the receiver tracking signal; and

a transmitter comprising shifting circuitry that is operable during a next transmission

period for generating a frequency for a transmitter baseband signal that is shifted by an

amount indicated by the receiver tracking signal, and in a direction opposite to the direction

indicated by the receiver tracking signal, wherein said shifting circuitry of said transmitter

and said receiver comprises a frequency to phase accumulator circuit and a digital phase

shifter circuit, and circuitry for time multiplexing said frequency to phase accumulator circuit

and said digital phase shifter circuit between said receiver baseband subsystem and said

transmitter baseband subsystem

wherein the receiver further comprises a local clock that defines a clock frequency (CF) and

clock period, carrier loop tracking circuitry for outputting on each clock period a frequency

change of the carrier, a sample and hold circuit for storing the output of the carrier loop

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tracking circuitry (SH value) on each clock period, and an accumulator of length L for

accumulating sequential SH values, said receiver configured to input the tracking signal

 $\underline{f_0}$ =(CF*SH value)/L to the shifting circuitry.

9.(Previously Presented) A communication device as in claim 8, wherein the carrier

conveys a CDMA communication signal.

10.(Previously Presented) A communication device as in claim 8, wherein said

communication device is a TDD communication device and comprises Customer Premises

Equipment (CPE), and where the carrier is received from a transmitter of an Access Point

(AP).

11.(Previously Presented) A communication device as in claim 8, and further comprising

sample and hold means responsive to an end of the receive period for storing the receiver

tracking signal for use during the next transmission period.

12.(Currently Amended) A Time Division Duplex (TDD) Code Division Multiple

Access (CDMA) communication system comprising a plurality of Customer Premises

Equipment (CPE) and an Access Point (AP) that communicate through RF links, wherein a

CPE comprises a receiver baseband subsystem and a transmitter baseband subsystem and

further comprising:

receiver circuitry operable during a receive period for receiving an RF carrier from

the AP and for deriving a receiver tracking signal that is indicative of an error between the

received carrier and a reference signal, the receiver tracking signal derived from an

accumulated plurality of outputs from a carrier loop tracking circuit, said receiver circuitry

further comprising a digital phase shifter for correcting the frequency and phase of a receiver

baseband signal by an amount and in a direction indicated by the receiver tracking signal;

multiplexing circuitry for sharing said digital phase shifter between said receiver

baseband subsystem and said transmitter baseband subsystem; and

transmitter circuitry operable during a next transmission period for operating said

digital phase shifter to correct the frequency of a transmitter baseband signal by an amount

indicated by the receiver tracking signal, and in a direction opposite to the direction indicated

by the receiver tracking signal, for pre-compensating an RF carrier that is transmitted to said

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AP so as to reduce carrier acquisition time at a receiver of the AP;

wherein the receiver circuitry further comprises a local clock that defines a clock frequency (CF) and clock period, carrier loop tracking circuitry for outputting on each clock period a frequency change of the carrier, a sample and hold circuit for storing the output of the carrier loop tracking circuitry (SH value) on each clock period, and an accumulator of length L for accumulating sequential SH values, said receiver circuitry configured to input the tracking signal f_0 =(CF*SH value)/L to the digital phase shifter.

13.(Previously Presented) A TDD system as in claim 12, wherein said CPE further comprises a frequency to phase accumulator having an input coupled to receive said receiver tracking signal and an output coupled to a control input of said digital phase shifter.

14.(Previously Presented) A TDD system as in claim 12, wherein said CPE further comprises a frequency to phase accumulator having an input coupled to receive said receiver tracking signal and an output coupled to a control input of said digital phase shifter, wherein said multiplexing circuitry shares both said frequency to phase accumulator and said digital phase shifter between said receiver baseband subsystem and said transmitter baseband subsystem.

15.(Previously Presented) A TDD system as in claim 13, wherein said CPE further comprises circuitry responsive to an end of the receive period for storing the receiver tracking signal for use by said digital phase shifter during the next transmission period.

16.(Previously Presented) A TDD system as in claim 12, wherein said CPE further comprises circuitry responsive to an end of the receive period for storing the receiver tracking signal and for inverting said stored receiver tracking signal for use by said digital phase shifter during the next transmission period.

17. (Canceled)

18.(Currently Amended) A Time Division Duplex (TDD) Code Division Multiple Access (CDMA) communication system comprising a plurality of Customer Premises Equipment (CPE) and an Access Point (AP) that wirelessly communicate with one another,

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wherein a CPE comprises receiver baseband means and transmitter baseband means and

further comprises:

a carrier loop tracking circuit;

a local clock;

frequency to phase accumulator means, having an input coupled to an output of the

carrier loop tracking circuit, operable during a receive period of a carrier from the AP for

deriving a receiver tracking signal that is indicative of an error between the received carrier

and a reference signal, the receiver tracking signal derived from an accumulated plurality of

outputs from a carrier loop tracking circuit;

correcting means, having a control input coupled to an output of the frequency to

phase accumulator means, for correcting the frequency and phase of a receiver baseband

signal by an amount and in a direction indicated by the receiver tracking signal;

sharing means for sharing said correcting means between said receiver baseband

means and said transmitter baseband means, wherein said sharing means shares both said

frequency to phase accumulator means and said correcting means between said receiver

baseband means and said transmitter baseband means; and

means operable during a next transmission period for operating said correcting means

to vary the frequency of a transmitter baseband signal by an amount indicated by the receiver

tracking signal, and in a direction opposite to the direction indicated by the receiver tracking

signal, for pre-compensating a transmitted carrier that is transmitted to said AP;

wherein the receiver tracking signal comprises:

 $\underline{f_0}=(CF*SH \text{ value})/L;$

wherein f₀ is the receiver tracking signal;

CF is a clock frequency of the local clock;

SH value is a value output from the carrier loop tracking circuit; and

L is a length of the frequency to phase accumulator means that stores a plurality of SH

values, one from each of a plurality of sequential clock periods.

19.(Previously Presented) A TDD system as in claim 18, wherein said CPE further

comprises means, responsive to an end of the receive period, for storing the receiver tracking

signal for use during the next transmission period.

20-23.(Canceled)

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